

Peer Review File

Article information: <https://dx.doi.org/10.21037/atm-23-1052>

Reviewer Comments

Comment 1: I believe it is not structured correctly since the authors speak first of the effects of radiation over the different BR techniques and afterwards they explain the techniques... The reader deserves to know the definitions and considerations regarding the BR types before considering the effects of RT in each scenario.

Reply 1: We have modified the text as advised. The main body was restructured, beginning with the type and definitions of breast reconstruction, followed by the effects of radiotherapy.

Changes in the text: See pages 5, 6, 7; Lines 115 – 149.

Comment 2: The negative effects of RT over BR have been widely studied and surgeons are aware of the possible complications. More in-depth explanations should be made to consider this article for publication. There is no mention of new RT schemes and the possible effects they may have. For example, it has been recently described that RT to the axilla may substitute axillary lymphadenectomy in selected patients, what effect could this have over BR?

Reply 2: We have added additional information with a depth explanation of the negative effects of RT in BR, and the new RT schemes used.

Changes in the text: See pages 7 - 10; Lines 156 - 218.

Comment 3: There was no mention of one major characteristic that affects the decision of the type or even if a reconstruction should take place, and it is the age of the patient. I suggest you incorporate this recent article in your discussion Chang-Azancot L, Abizanda P, Gijón M, Kenig N, Campello M, Juez J, Talaya A, Gómez-Bajo G, Montón J, Sánchez-Bayona R. Age and Breast Reconstruction. *Aesthetic Plast Surg.* 2023 Feb;47(1):63-72. doi: 10.1007/s00266-022-03024-0. Epub 2022 Aug 4. PMID: 35927500.

Reply 3: We have added information about the effect of age in BR and included the reference as suggested.

Changes in the text: See pages 6, 7; Lines 136 - 142.

Comment 4: Edition, grammar and format should be revised. I list some of the items that need to be revisited.

Comment 4.1: This review shows that the effects of BR during NART and ART are still being studied. The first phrase of the key content and findings in the abstract needs revision... Shouldn't it be the effects of RT over BR?

Reply 4.1: We have modified our text as advised.

Changes in the text: see page 2; lines 37, 38.

Comment 4.2: Abbreviations should be defined when the words first appear on the body of the article even if they have been previously used in the abstract. Such as implant-based breast reconstruction (I-BBR), autologous-based breast reconstruction (A-BBR), and tissue expander-implant reconstruction (TE)... TE reconstructions are a kind of implant-based reconstruction, they shouldn't be listed as a different category.

Reply 4.2: We have modified the text as advised.

Changes in the text: See page 5; Line 106

Comment 4.3: In text citations should be included within the phrase that is being cited (before the punctuation mark).

Reply 4.3: We have modified the complete reference citations as advised.

Comment 4.4: - P values should be showed in lowercase and cursive font (p = 0.117)

Reply 4.4: We have modified the text as advised.

Comment 4.5: I-BBR and A-BBR were associated with postoperative complications, with less than 5% partial flap loss... All surgical procedures are associated to complications. This statement needs revision.

Reply 4.5: We have reviewed the statement and modified it as advised.

Changes in the text: See page 12; Line 269 – 273.

Comment 4.6: Some abbreviations were not defined in the manuscript (all abbreviations were checked and defined)

Reply 4.6: We have checked and defined all the abbreviations in the text.

Comment 4.7: Results showed that NART did not raise the risk of open breast wounds when compared to post-mastectomy radiotherapy. What about when compared to non irradiated breasts?.

Reply 4.7: The mentioned study did not include patients without radiotherapy. The authors evaluated immediate BR in clinically staged patients with high-risk breast cancer or LABC (Stage II-III) treated with NART followed by mastectomy with or without axillary surgery.

Comment 4.8: ART's detrimental effects on autologous tissue do not depend on the type of reconstruction chosen. Instead of type shouldn't it be timing?

Reply 4.8: We have reviewed the statement and modified it as advised.

Changes in the text: See page 18; Line 401 – 402.

Comment 4.9: Additionally, intraoperative maneuvers, such as using Indocyanine Green Angiography to evaluate the tissue perfusion of the skin flaps, can help detect perfusion problems and prevent flap necrosis and wound dehiscence in the postoperative stage, which has been associated with an increased risk of locoregional recurrence. Rephrase, too long and can lead to mistakes by associating indocyanine green to recurrence...

Reply 4.9: We have modified the text as advised.

Changes in the text: See page 20; Line 439 – 446.

Comment 4.10: Abbreviations found within figures should be defined in the caption.

Reply 4.10: We have checked all the included figures and abbreviations were defined in the caption.

Changes in the text: See page 35; Line 776,777,787.